

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 09/654,169

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1 and 2 (canceled).

Claim 3 (currently amended): An image information reading apparatus ~~as defined in~~
~~Claim 1 comprising~~

a light source for generating a light beam,

photoelectric reading means for detecting intensity of incident light in a photoelectric
manner,

a sample holding portion for holding a scanning target carrying certain image
information,

an optical head which leads the light beam emitted by the light source to the scanning
target placed on the sample holding portion so that the scanning target is irradiated with the light
beam, and which leads induced light emitted by the scanning target in response to the irradiation
thereon to the photoelectric reading means,

primary scanning means for moving the optical head in one direction with respect to the
scanning target so that the scanning target is scanned in said one direction with the light beam
led thereto by the optical head,

secondary scanning means for moving at least one of the sample holding portion or the
optical head in another direction which is substantially orthogonal to said one direction, and

an optical element which is provided at a part on an optical path of the induced light
between the optical head and the photoelectric reading means and which has a sufficient
refractive power for collecting the induced light led toward the photoelectric reading means by
the optical head, wherein

the secondary scanning means is capable of moving the optical head, and

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the optical element comprises at least a first optical element to be moved together with the optical head by the secondary scanning means and a fixed second optical element.

Claim 4 (original): An image information reading apparatus as defined in Claim 3, wherein the optical element includes a lens with a positive refractive power, a parabolic mirror or a concave mirror.

Claim 5 (currently amended): An image information reading apparatus as defined in Claim [[1]]3, wherein

the scanning target carrying the certain image information is a sample in which an organic substance marked with fluorescent dye is distributed,

the light beam is a beam of stimulating light which is capable of stimulating the fluorescent dye, and

the induced light is fluorescence from the stimulated fluorescent dye.

Claim 6 (original): An image information reading apparatus as defined in Claim 5, wherein the sample is any one of a gel-like supporting object, a membrane filter onto which the gel-like supporting object is transcribed, and an accumulation phosphor sheet.

Claim 7 (new): An image information reading apparatus comprising
a light source for generating a light beam,
photoelectric reading means for detecting intensity of incident light in a photoelectric manner,

a sample holding portion for holding a scanning target carrying certain image information,

an optical head which leads the light beam emitted by the light source to the scanning target placed on the sample holding portion so that the scanning target is irradiated with the light beam, and which leads induced light emitted by the scanning target in response to the irradiation thereon to the photoelectric reading means,

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primary scanning means for moving the optical head in one direction with respect to the scanning target so that the scanning target is scanned in said one direction with the light beam led thereto by the optical head,

secondary scanning means for moving at least one of the sample holding portion or the optical head in another direction which is substantially orthogonal to said one direction, and

means for maintaining the induced light incident on said photoelectric reading means at a substantially uniform level regardless of a scanning position of said optical head, wherein said means for maintaining is provided in an optical path of the induced light between said optical head and said photoelectric reading means.

Claim 8 (new): An image information reading apparatus as defined in Claim 7, wherein said means for maintaining includes at least one of a lens with a positive refractive power, a parabolic mirror, and a concave mirror.

Claim 9 (new): An image information reading apparatus as defined in Claim 7, wherein the scanning target carrying the certain image information is a sample in which an organic substance marked with fluorescent dye is distributed,

the light beam is a beam of stimulating light which is capable of stimulating the fluorescent dye, and

the induced light is fluorescence from the stimulated fluorescent dye.

Claim 10 (new): An image information reading apparatus as defined in Claim 9, wherein the sample is any one of a gel-like supporting object, a membrane filter onto which the gel-like supporting object is transcribed, and an accumulation phosphor sheet.